AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for measuring a ~~measurement object~~ vehicle wheel with the aid of a measuring system comprising at least one sensor system for recording a contour of the ~~measurement object~~ vehicle wheel in a measurement coordinate system, the method comprising the following steps:

positioning the ~~measurement object~~ vehicle wheel in a measurement position in the coverage range of the senor system, wherein the ~~measurement object~~ vehicle wheel is substantially rotationally symmetrical with respect to a measurement object axis, the ~~measurement object~~ vehicle wheel axis extending through a bore in a central hub of the ~~measurement object~~ vehicle wheel;

establishing the position of the ~~measurement object~~ vehicle wheel and determining an object coordinate system by means of the central hub of the ~~measurement object~~ vehicle wheel which functions as a reference structure positioned at or near the measurement object axis;

linking the object coordinate system with the measurement coordinate system;

rotating the sensor system around the ~~measurement object~~ vehicle wheel for determining contour data selected from the group consisting of surface contour data and wall thickness data of the ~~measurement object~~ vehicle wheel; and

processing the contour data in an evaluation unit and compensating for an imprecise location of the ~~measurement object~~ vehicle wheel in the measurement position by taking account of the position of the object coordinate system in relation to the measurement coordinate system.

2. (Currently amended) The method according to claim 1, wherein during the measurement, the ~~measurement object~~ vehicle wheel is so fixed by a centering device that accessibility to the reference structure is not impeded.

3. (Previously presented) The method according to claim 2, wherein the centering

device acts on the outer contour of the ~~measurement object~~ vehicle wheel.

4. (Previously presented) The method according to claim 2, wherein a reference device for establishing the position of the object coordinate system scans the freely acessible reference structure.

5. (Previously presented) The method according to claim 4, wherein the reference device scans in noncontacting manner the freely accessible reference structure.

6. (Currently amended) The method according to claim 1, wherein a reference device performs a mechanical orientation of the ~~measurement object~~ vehicle wheel by means of the reference system for establishing the position of the object coordiante system.

7. (Currently amended) The method according to claim 1, wherein a shape and/or position variation of at least one ~~measurement object~~ vehicle wheel surface portion provided for engagement on an object surface, oriented orthogonally to a rotation axis of the sensor system and formed on the ~~measurement object~~ vehicle wheel is determined by means of the sensor system and/or reference device.

8. (Currently amended) The method according to claim 1, wherein a marking is made on the ~~measurement object~~ vehicle wheel defining a characterisitc measurement point by a marking device connected to the sensor system.

9. (Currently amended) The method according to claim 1, wherein the ~~measurement object~~ vehicle wheel is conveyed linearly between an insertion opening and a discharge opening of the measurement system.

10. (Previously presented) The method according to claim 1, wherein measurement data of the sensor system are linked with measurement data of the reference device for determining

wall thicknesses.

11. (Currently amended) A device for measuring a ~~measurement object~~ vehicle wheel having a central hub defining at least one reference structure for defining an ~~object-fixed~~ object coordinate system, the device comprising: ~~having a measuring system with~~

at least one sensor system for recording [[a]] contour data of the ~~measurement object~~ vehicle wheel in a measurement coordinate system; ~~and~~

a reference device for establishing the position of the object coordinate system with the aid of the reference structure[[,]]; and

a processor comprising an evaluation unit for processing the contour data and compensating for an imprecise location of the vehicle wheel by taking account of the position of the object coordinate system in relation to the measurement coordinate system,

the sensor system being mounted in rotary manner relative to the ~~measurement object~~ vehicle wheel in such a way that the sensor system is rotatable around the ~~measurement object~~ vehicle wheel.

12. (Currently amended) The device according to claim 11, wherein there is a centering device for a positioning and/or fixing of the ~~measurement object~~ vehicle wheel in the measurement position before and/or during measurement.

13. (Previously presented) The device according to claim 11, wherein the reference device is set up for a noncontacting reference structure scanning.

14. (Currently amended) The device according to claim 11, wherein the reference device is constructed for mechanically centering the ~~measurement object~~ vehicle wheel with the aid of the reference structure.

15. (Currently amended) The device according to claim 11, wherein the sensor system and/or reference device is provided for determining the flatness and/or orientation of a

~~measurement object~~ vehicle wheel surface portion provided on the ~~measurement object~~ vehicle wheel, oriented substantially orthogonally to a rotation axis of the sensor system and constructed for engagement on an object surface.

16. (Currently amended) The device according to claim 11, wherein a marking device for making a marking on the ~~measurement object~~ vehicle wheel is provided on the sensor system and/or reference device.

17. (Previously presented) The device according to claim 11, wherein the reference device is arranged in rotary manner substantially coaxially to a rotation axis of the sensor system.

18. (Previously presented) The device according to claim 11, wherein integration takes place into a conveying device, particularly a linear conveying system.

19. (Previously presented) The device according to claim 11, wherein there are size determination means for a basic positioning of the sensor system and/or reference device.

20. (Previously presented) The method according to claim 6, wherein the reference structure is measured.

21. (Currently amended) The method according to claim 9, wherein the ~~measurement object~~ vehicle wheel is conveyed perpendicular to the sensor system rotation axis.

22. (Currently amended) The method according to claim 1, wherein the sensor system is rotated about a rotation axis enclosed by a circumference of the ~~measurement object~~ vehicle wheel.

23. (Previously presented) The method according to claim 1, wherein the measurement comprises a complete rotation of the sensor system about a rotation axis.

24. (Currently amended) The method according to claim 1, wherein the ~~measurement object~~ vehicle wheel rests during the measurement.

25. (Cancelled)

26. (Currently amended) The device according to claim 11, wherein the sensor system is rotatable about a rotation axis enclosed by a circumference of the ~~measurement object~~ vehicle wheel.

27. (Previously presented) The device according to claim 11, wherein the measurement comprises a complete rotation of the sensor system about a rotation axis.

28. (Currently amended) The device according to claim 11, wherein the ~~measurement object~~ vehicle wheel rests during the measurement.

29. (Cancelled)